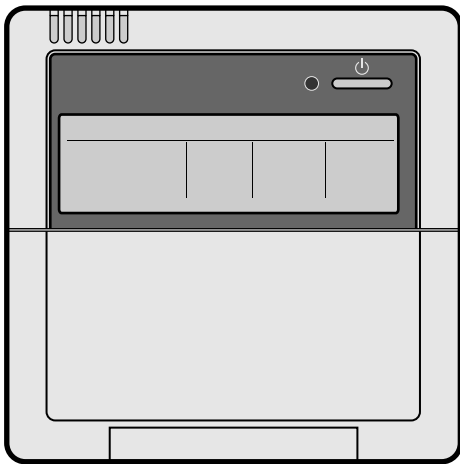


DAIKIN

OPERATION MANUAL

VRV[®]-WIII System air conditioner



RWEYQ8PY1
RWEYQ10PY1*
RWEYQ16PY1
RWEYQ18PY1
RWEYQ20PY1*
RWEYQ24PY1
RWEYQ26PY1
RWEYQ28PY1
RWEYQ30PY1*

*Only models with suffix numbers
10, 20, and 30 are sold in China.

中国仅出售后缀号为10、20和30的机型。

Operation manual
VRVWIII System air conditioner

English

Betriebsanweisung
VRVWIII System Klimaanlage

Deutsch

Manuel d'utilisation
Conditionneur d'air VRVWIII System

Français

Manual de operación
Sistema de acondicionador de aire VRVWIII

Español

Manuale d'uso
Condizionatore d'aria a sistema VRVWIII

Italiano

Εγχειρίδιο λειτουργίας
Κλιματιστικό με σύστημα VRVWIII

Ελληνικά

Gebruiksaanwijzing
Airconditioner met VRVWIII Systeem

Nederlands

Manual de funcionamento
Ar condicionado VRVWIII System

Portugues

Руководство по эксплуатации
Кондиционер системы VRVWIII

Русский

使用说明书
VRVWIII系统空调机

中文
(简体)

Thank you for purchasing this Daikin air conditioner. Carefully read this operation manual before using the air conditioner. It will tell you how to use the unit properly and help you if any trouble occurs. After reading the manual, keep it in your custody for future reference. See also the operation manual included with the indoor unit for details on the indoor unit. Store the operation manual included with the indoor unit together with this operation manual in a safe place. After receiving the warranty card from the dealer, store it in a safe place.

Vielen Dank für den Kauf einer Klimaanlage von Daikin. Lesen Sie dieses Betriebsbuch vor Inbetriebnahme der Klimaanlage sorgfältig durch. Sie erfahren hier, wie die Einheit korrekt genutzt wird, und es ist Ihnen bei Störungen behilflich. Lesen Sie das Handbuch sorgfältig und bewahren Sie es für den späteren Gebrauch sorgfältig auf. Weitere Informationen zu diesem Gerät finden Sie in dem beiliegenden Betriebsbuch. Bewahren Sie das dem Gerät beiliegende Handbuch an einem sicheren Ort auf. Bewahren Sie die Garantiekarte, die Sie von Ihrem Händler erhalten haben, ebenfalls an einem sicheren Ort auf.

Nous vous remercions d'avoir acheté ce climatiseur Daikin. Lisez soigneusement ce manuel d'utilisation avant d'utiliser le climatiseur. Il vous enseignera à utiliser correctement l'unité et vous aidera en cas de panne. Après lecture du manuel, veuillez le conserver à des fins de consultation ultérieure. Veuillez également vous reporter au manuel de l'unité intérieure pour les détails concernant l'unité intérieure. Conservez le manuel de l'unité intérieure avec le présent manuel dans un endroit sûr. Après réception de la carte de garantie transmise par le revendeur, conservez-la dans un endroit sûr.

Gracias por haber adquirido este acondicionador de aire Daikin. Lea con atención este manual antes de utilizar el artefacto. El manual explica cómo usar la unidad correctamente y lo ayuda en caso de que surjan problemas. Una vez leído el manual, consérvelo en lugar seguro para futuras referencias. Asimismo, si lo desea, puede consultar detalles sobre la unidad interior en el manual de funcionamiento provisto con la misma. Guarde el manual de funcionamiento con la unidad interior y con este manual en un lugar seguro. Cuando reciba la tarjeta de garantía del distribuidor, guárdela en un lugar seguro.

La ringraziamo di aver acquistato questo condizionatore d'aria Daikin. Leggere attentamente questo manuale prima di utilizzare il condizionatore. Contiene le istruzioni per usare correttamente l'unità e per rimediare ad eventuali problemi di funzionamento. Dopo aver letto il manuale, conservatelo per il futuro. Vedere anche i dettagli sull'unità interna contenuti nel manuale d'uso in dotazione all'unità interna. Conservare il manuale d'uso in dotazione all'unità interna in un luogo sicuro insieme al presente manuale d'uso. Dopo aver ricevuto la scheda di garanzia dal vostro rivenditore, conservatela in un luogo sicuro.

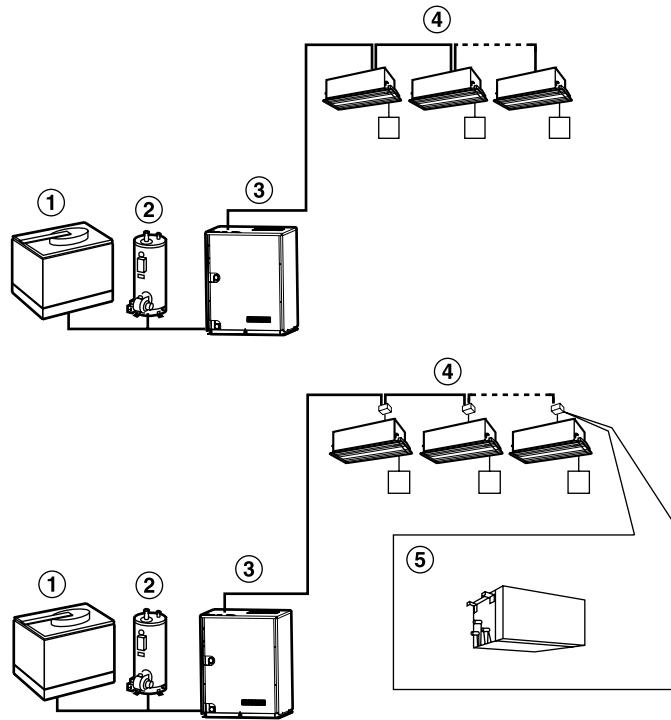
Σας ευχαριστούμε που αγοράσατε αυτή την κλιματιστική συσκευή της Daikin. Διαβάστε προσεκτικά αυτό το εγχειρίδιο χρήσης πριν χρησιμοποιήσετε την κλιματιστική συσκευή. Θα σας εξηγήσει πώς να χρησιμοποιείτε τη μονάδα σωστά και θα σας βοηθήσει αν παρουσιάσει κάποιο πρόβλημα. Αφού διαβάσετε αυτό το εγχειρίδιο, φυλάξτε το κοντά σας για μελλοντική αναφορά. Βλέπε επίσης το εγχειρίδιο λειτουργίας που περιλαμβάνεται μαζί με την εσωτερική μονάδα για λεπτομέρειες σχετικά με αυτήν. Φυλάξτε το εγχειρίδιο λειτουργίας που περιλαμβάνεται με την εσωτερική μονάδα μαζί με αυτό το εγχειρίδιο λειτουργίας σε ένα ασφαλές μέρος. Αφού λάβετε την κάρτα εγγύησης από τον αντιπρόσωπο, φυλάξτε την σε ένα ασφαλές μέρος.

Hartelijk dank voor uw keuze voor een Daikin airconditioner. Lees deze gebruiksaanwijzing zorgvuldig door voordat u de airconditioner in gebruik neemt. In de gebruiksaanwijzing kunt u lezen hoe u het apparaat op de juiste manier gebruikt en wat u kunt doen bij storingen. Nadat u de handleiding heeft gelezen, dient u deze te bewaren om hem in toekomst te kunnen raadplegen. Raadpleeg eveneens de bedieningshandleiding van de binneneenheid voor nadere details over de binneneenheid. Berg de bedieningshandleiding voor de binneneenheid samen met deze handleiding op een veilige plek op. Berg de garantiekaart op een veilige plek op, zodra u deze van de dealer heeft ontvangen.

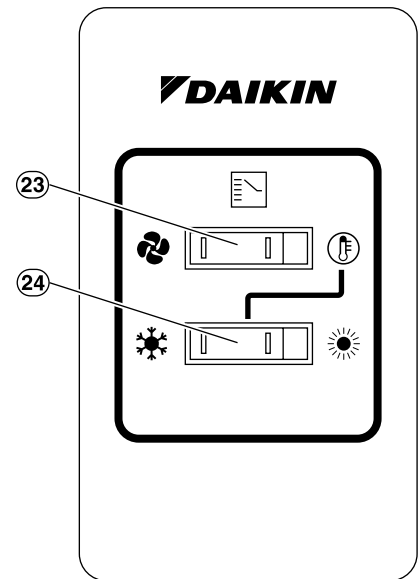
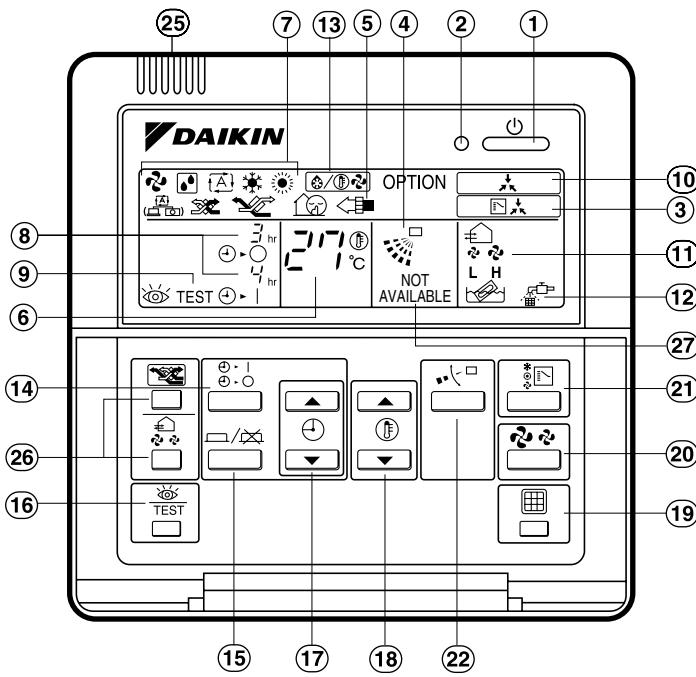
Muito obrigado por ter adquirido este aparelho de ar condicionado Daikin. Antes de utilizar o aparelho, leia atentamente o presente manual de funcionamento. Nele obterá informações sobre o modo de utilizar corretamente o aparelho e ajuda na eventualidade de ocorrência de problemas. Após ler o manual, guarde-o para futura referência. Veja também o manual de operação incluso com a unidade interior para maiores detalhes sobre a unidade interior. Guarde o manual de operação incluso com a unidade interior, juntamente com este manual de operação, em um lugar seguro. Após receber o cartão de garantia do revendedor, guarde-o em um lugar seguro.

Спасибо за покупку данного кондиционера фирмы Daikin. До начала работы с кондиционером внимательно изучите данное руководство по эксплуатации. В нем излагаются правила надлежащего пользования устройством и приводятся рекомендации пользователю по поиску и устранению неисправностей. После внимательного прочтения данного руководства храните его в надежном месте для последующего применения. Подробная информация по комнатному блоку приводится в руководстве по эксплуатации, прилагаемом к комнатному блоку. Храните руководство по эксплуатации, прилагаемое к комнатному блоку, в надежном месте вместе с настоящим руководством по эксплуатации. После получения гарантийного талона от продавца, храните гарантийный талон в надежном месте.

感谢您购买大金的空调机。
在使用本空调机之前，请仔细阅读本使用说明书。它将告诉您如何正确使用本装置，并能在出现问题时帮助您。
阅读完毕本说明书后，请妥善保管，以备需要时查阅。
并参看室内机所附的使用说明书，以了解室内机的详情。请将室内机所附的使用说明书与本使用说明书一起，存放在安全的地方。
收到经销商的保修卡后，请存放在安全的地方。

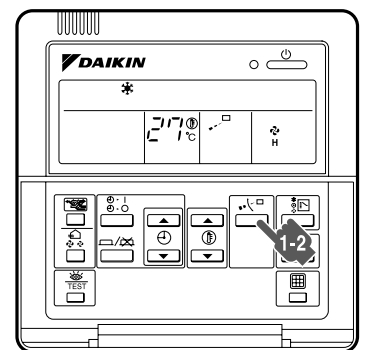
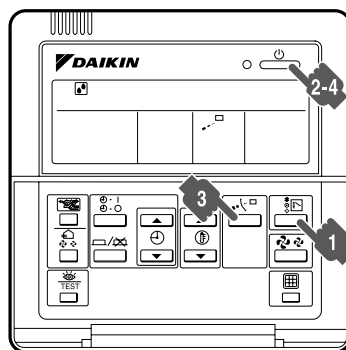
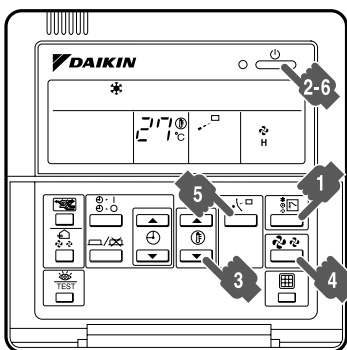


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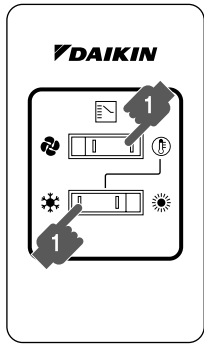
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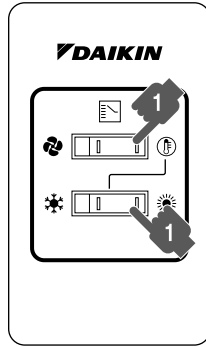
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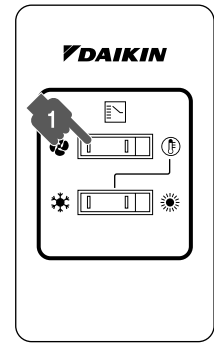
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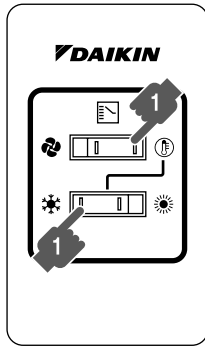
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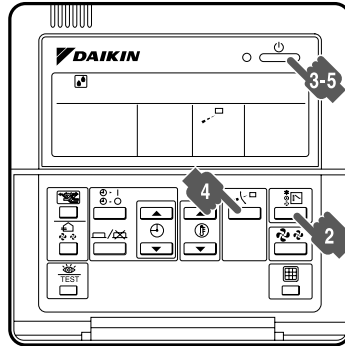
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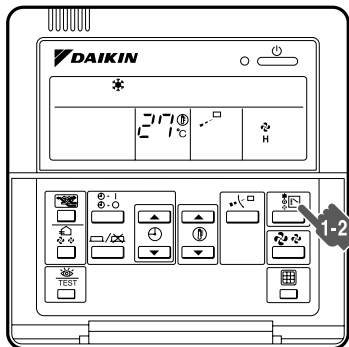
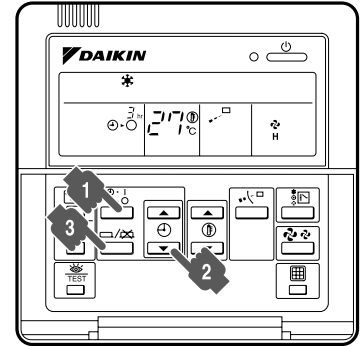
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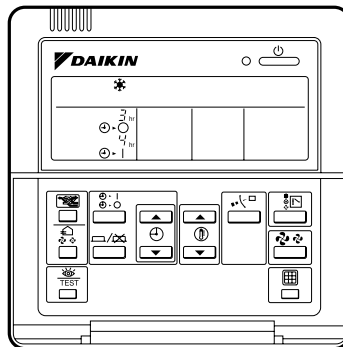
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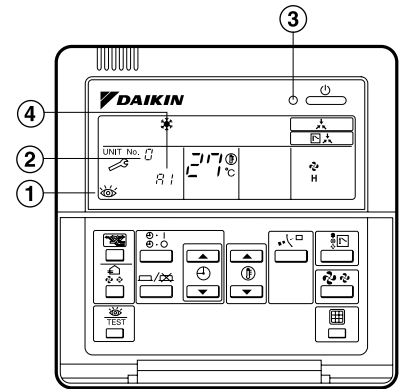
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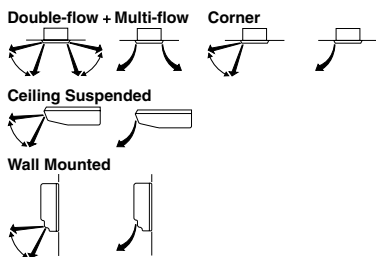
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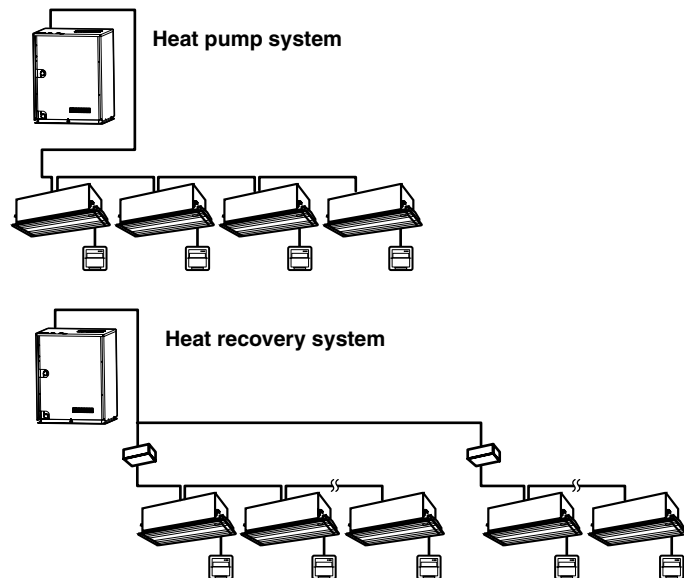
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Important information regarding the refrigerant used

This product contains fluorinated greenhouse gases covered by the Kyoto Protocol.

Refrigerant type: R410A

GWP⁽¹⁾ value: 1975

⁽¹⁾ GWP = global warming potential

Periodical inspections for refrigerant leaks may be required depending on European or local legislation. Please contact your local dealer for more information.

1. SAFETY PRECAUTIONS

To gain full advantage of the air conditioner's functions and to avoid malfunction due to mishandling, we recommend that you read this instruction manual carefully before use.

This air conditioner is classified under "appliances not accessible to the general public".

The precautions described herein are classified as WARNING and CAUTION. They both contain important information regarding safety. Be sure to observe all precautions without fail.

⚠ WARNING Failure to follow these instructions properly may result in personal injury or loss of life.

⚠ CAUTION Failure to observe these instructions properly may result in property damage or personal injury, which may be serious depending on the circumstances.

After reading, keep this manual in a convenient place so that you can refer to it whenever necessary. If the equipment is transferred to a new user, be sure also to hand over the manual.

⚠ WARNING

Be aware that prolonged, direct exposure to cool or warm air from the air conditioner, or to air that is too cool or too warm can be harmful to your physical condition and health.

When the air conditioner is malfunctioning (giving off a burning odor, etc.) turn off power to the unit and contact your local dealer.

Continued operation under such circumstances may result in a failure, electric shocks or fire hazards.

Consult your local dealer about installation work.

Doing the work yourself may result in water leakage, electric shocks or fire hazards.

Ask your dealer to install in a machine room that has no water drops by raining.

This unit is for indoor use.

Incomplete installation performed by yourself may result in a water leakage, electric shock, and fire.

Consult your local dealer regarding modification, repair and maintenance of the air conditioner.

Improper workmanship may result in water leakage, electric shocks or fire hazards.

Do not place objects, including rods, your fingers, etc., in the air inlet or outlet.

Injury may result due to contact with the air conditioner's highspeed fan blades.

Never touch the air outlet or the horizontal blades while the swing flap is in operation.

Fingers may become caught or the unit may break down.

Beware of fire in case of refrigerant leakage.

If the air conditioner is not operating correctly, i.e. not generating cool or warm air, refrigerant leakage could be the cause. Consult your dealer for assistance.

The refrigerant within the air conditioner is safe and normally does not leak. However, in the event of a leakage, contact with a naked burner, heater or cooker may result in generation of noxious gas. Do not longer use the air conditioner until a qualified service person confirms that the leakage has been repaired.

Consult your local dealer regarding what to do in case of refrigerant leakage.

When the air conditioner is to be installed in a small room, it is necessary to take proper measures so that the amount of any leaked refrigerant does not exceed the concentration limit in the event of a leakage. Otherwise, this may lead to an accident due to oxygen depletion.

Contact professional personnel about attachment of accessories and be sure to use only accessories specified by the manufacturer.

If a defect results from your own workmanship, it may result in water leaks, electric shock or fire.

Consult your local dealer regarding relocation and reinstallation of the air conditioner.

Improper installation work may result in leakage, electric shocks or fire hazards.

Be sure to use fuses with the correct ampere reading.

Do not use improper fuses, copper or other wires as a substitute, as this may result in electric shock, fire, injury or damage to the unit.

Be sure to earth the unit.

Do not earth the unit to a utility pipe, lightning conductor or telephone earth lead. Imperfect earthing may result in electric shocks or fire.

A high surge current from lightning or other sources may cause damage to the air conditioner.

Be sure to install an earth leakage breaker.

Failure to install an earth leakage breaker may result in electric shocks or fire.

Consult the dealer if the air conditioner submerges owing to a natural disaster, such as a flood or typhoon.

Do not operate the air conditioner in that case, or otherwise a malfunction, electric shock, or fire may result.

Do not use the product in the atmosphere contaminated with oil vapor, such as cooking oil or machine oil vapor.

Oil vapor may cause crack damage, electric shocks, or fire.

Do not use the product in places with excessive oily smoke, such as cooking rooms, or in places with flammable gas, corrosive gas, or metal dust.

Using the product in such places may cause fire or product failures.

Do not use flammable materials (e.g., hair-spray or insecticide) near the product.

Do not clean the product with organic solvents such as paint thinner.

The use of organic solvents may cause crack damage to the product, electric shocks, or fire.

Be sure to use a dedicated power supply for the air conditioner.

The use of any other power supply may cause heat generation, fire, or product failures.

Do not start or stop operating the air conditioner with the power supply breaker turned ON or OFF.

Otherwise, fire or water leakage may result.

Furthermore, the fan will rotate abruptly if power failure compensation is enabled, which may result in injury.

CAUTION

Do not use the air conditioner for purposes other than those for which it is intended.

Do not use the air conditioner for cooling precision instruments, food, plants, animals or works of art as this may adversely affect the performance, quality and/or longevity of the object concerned.

To avoid oxygen depletion, ensure that the room is adequately ventilated if equipment such as a burner is used together with the air conditioner.

After prolonged use, check the unit stand and its mounts for damage.

If left in a damaged condition, the unit may fall and cause injury.

Do not place flammable sprays or operate spray containers near the unit as this may result in fire.

Before cleaning, be sure to stop unit operation, turn the breaker off or remove the power cord.

Otherwise, an electric shock and injury may result.

To avoid electric shocks, do not operate with wet hands.

Do not place objects that are susceptible to moisture directly beneath the indoor or outside units.

Under certain conditions, condensation on the main unit or refrigerant pipes, air filter dirt or drain blockage may cause dripping, resulting in fouling or failure of the object concerned.

Do not place appliances that produce naked flames in places exposed to the air flow from the unit as this may impair combustion of the burner.

Do not place heaters directly below the unit, as resulting heat can cause deformation.

Do not allow a child to mount on the outside unit or avoid placing any object on it.

Falling or tumbling may result in injury.

Do not block air inlets nor outlets.

Impaired air flow may result in insufficient performance or trouble.

Be sure that children, plants or animals are not exposed directly to airflow from the unit, as adverse effects may ensue.

Do not wash the air conditioner or the remote controller with water, as this may result in electric shocks or fire.

Do not install the air conditioner at any place where there is a danger of flammable gas leakage.

In the event of a gas leakage, build-up of gas near the air conditioner may result in fire hazards.

Do not put flammable containers, such as spray cans, within 1 m from the blow-off mouth.

The containers may explode because the warm air output of the indoor or outside unit will affect them.

Arrange the drain to ensure complete drainage.

If proper drainage from the outside drain pipe does not occur during air conditioner operation, there could be a blockage due to dirt and debris build-up in the pipe.

This may result in a water leakage from the indoor unit. Under these circumstances, stop air conditioner operation and consult your dealer for assistance.

Do not let children play on or around the outside unit.

If they touch the unit carelessly, injury may be caused.

Do not place water containers (flower vases, etc.) on the unit, as this may result in electric shocks or fire.

Consult your dealer regarding cleaning the inside of the air conditioner.

Improper cleaning may cause breakage of plastic parts, water leakage and other damage as well as electric shocks.

To avoid injury, do not touch the air inlet or aluminium fins of the unit.

Do not place the controller exposed to direct sunlight.

The LCD display may get discolored, failing to display the data.

Do not wipe the controller operation panel with benzine, thinner, chemical dustcloth, etc.

The panel may get discolored or the coating peeled off. If it is heavily dirty, soak a cloth in water-diluted neutral detergent, squeeze it well and wipe the panel clean. And wipe it with another dry cloth.

Never touch the internal parts of the controller.

Do not remove the front panel. Touching certain internal parts will cause electric shocks and damage to the unit. Please consult your dealer about checking and adjustment of internal parts.

Do not leave the remote controller wherever there is a risk of wetting.

If water gets into the remote controller there is a risk of electrical leakage and damage to electronic components.

Never press the button of the remote controller with a hard, pointed object.

The remote controller may be damaged.

Never pull or twist the electric wire of a remote controller.

It may cause the unit to malfunction.

Do not operate the air conditioner when using a room fumigation - type insecticide.

Failure to observe could cause the chemicals to become deposited in the unit, which could endanger the health of those who are hypersensitive to chemicals.

The appliance is not intended for use by unattended young children or infirm persons.

Impairment of bodily functions and harm to health may result.

Children should be supervised to ensure that they do not play with the unit or its remote controller.

Accidental operation by a child may result in impairment of bodily functions and harm health.

Do not place objects in direct proximity of the outside unit and do not let leaves and other debris accumulate around the unit.

Leaves are a hotbed for small animals which can enter the unit. Once in the unit, such animals can cause malfunctions, smoke or fire when making contact with electrical parts.

Watch your steps at the time of air filter cleaning or inspection.

High-place work is required, to which utmost attention must be paid.

If the scaffold is unstable, you may fall or topple down, thus causing injury.

2. SPECIFICATIONS

Model		RWEYQ8PY1	RWEYQ10PY1	RWEYQ16PY1
System name		RWEYQ8PY1	RWEYQ10PY1	RWEYQ16PY1
Independent unit		RWEYQ8PY1	RWEYQ10PY1	RWEYQ8PY1 RWEYQ8PY1
Power supply				
Phase		— 3N~	3N~	3N~
Frequency	(Hz)	50	50	50
Voltage	(V)	380-415	380-415	380-415
Nominal cooling capacity	(kW)	22.4	26.7	44.8
Nominal heating capacity	(kW)	25.0	31.5	50.0
Dimensions HxWxD	(mm)	1000x780x550	1000x780x550	1000x780x550 +1000x780x550
Mass	(kg)	149	150	149+149
Refrigerant				
type		— R410A	R410A	R410A
charge (*1)	(kg)	3.5	4.2	3.5+3.5
Design pressure				
refrigerant high side	(bar)	40	40	40
	(MPa)	4.0	4.0	4.0
refrigerant low side	(bar)	25	25	25
	(MPa)	2.5	2.5	2.5
water side	(bar)	19.6	19.6	19.6
	(MPa)	1.96	1.96	1.96

Model				
System name	RWEYQ18PY1	RWEYQ20PY1	RWEYQ24PY1	
Independent unit	RWEYQ8PY1	RWEYQ10PY1	RWEYQ8PY1	
	RWEYQ10PY1	RWEYQ10PY1	RWEYQ8PY1	
			RWEYQ8PY1	
Power supply				
Phase	—	3N~	3N~	3N~
Frequency (Hz)	50	50	50	50
Voltage (V)	380-415	380-415	380-415	380-415
Nominal cooling capacity (kW)	49.1	53.4	67.2	67.2
Nominal heating capacity (kW)	56.5	63.0	75.0	75.0
Dimensions HxWxD				
(mm)	1000x780x550 +1000x780x550	1000x780x550 +1000x780x550	1000x780x550 +1000x780x550	1000x780x550 +1000x780x550
Mass				
(kg)	149+150	150+150	149+149+149	149+149+149
Refrigerant				
type	—	R410A	R410A	R410A
charge (*1)	(kg)	3.5+4.2	4.2+4.2	3.5+3.5+3.5
Design pressure				
refrigerant high side (bar)	40	40	40	40
(MPa)	4.0	4.0	4.0	4.0
refrigerant low side (bar)	25	25	25	25
(MPa)	2.5	2.5	2.5	2.5
water side (bar)	19.6	19.6	19.6	19.6
(MPa)	1.96	1.96	1.96	1.96

Model				
System name	RWEYQ26PY1	RWEYQ28PY1	RWEYQ30PY1	
Independent unit	RWEYQ8PY1	RWEYQ8PY1	RWEYQ10PY1	
	RWEYQ8PY1	RWEYQ10PY1	RWEYQ10PY1	
	RWEYQ10PY1	RWEYQ10PY1	RWEYQ10PY1	
Power supply				
Phase	—	3N~	3N~	3N~
Frequency (Hz)	50	50	50	50
Voltage (V)	380-415	380-415	380-415	380-415
Nominal cooling capacity (kW)	71.5	75.8	80.1	80.1
Nominal heating capacity (kW)	81.5	88.0	94.5	94.5
Dimensions HxWxD				
(mm)	1000x780x550 +1000x780x550 +1000x780x550	1000x780x550 +1000x780x550 +1000x780x550	1000x780x550 +1000x780x550 +1000x780x550	1000x780x550 +1000x780x550 +1000x780x550
Mass				
(kg)	149+149+150	149+150+150	150+150+150	150+150+150
Refrigerant				
type	—	R410A	R410A	R410A
charge (*1)	(kg)	3.5+3.5+4.2	3.5+4.2+4.2	4.2+4.2+4.2
Design pressure				
refrigerant high side (bar)	40	40	40	40
(MPa)	4.0	4.0	4.0	4.0
refrigerant low side (bar)	25	25	25	25
(MPa)	2.5	2.5	2.5	2.5
water side (bar)	19.6	19.6	19.6	19.6
(MPa)	1.96	1.96	1.96	1.96



(*1) Refrigerant charge at factory shipment

3. WHAT TO DO BEFORE OPERATION

This operation manual is for the following system with standard control. Before initiating operation, contact your Daikin dealer for the operation that corresponds to your system type and mark.

If your installation has a customized control system, ask your Daikin dealer for the operation that corresponds to your system.

Outside units (Refer to figure 1)

	Cool/Heat selector	Operation modes
Inverter series		
<input type="checkbox"/> Heat pump system	<input type="checkbox"/> yes <input type="checkbox"/> no	
<input type="checkbox"/> Heat recovery system	<input type="checkbox"/> yes <input type="checkbox"/> no	

• Heat pump system

- Switchover to cooling or heating operation is performed for each outside unit.

- This is a system to perform air-conditioning by exchanging the heat with chilled water or warmed water being sent from a boiler or solar system, etc. through a <outside unit> which corresponds to the conventional outdoor unit.

• Heat recovery system

- Switchover to cooling or heating operation is performed for each BS unit.
- This is a system to perform air-conditioning by exchanging the heat with chilled water or warmed water being sent from a boiler or solar system, etc. through a <outside unit> which corresponds to the conventional outdoor unit.

• Names and functions of parts (Refer to figure 1)

1. Closed cooling tower
2. Boiler
3. Outside unit
4. Indoor unit
5. BS unit (For cool/heat changeover)

4. REMOTE CONTROLLER AND COOL/HEAT SELECTOR: NAME AND FUNCTION OF EACH SWITCH AND DISPLAY (Refer to figure 2 and 3)

COOL/HEAT SELECTOR is used to switch between cooling and heating for each outside unit or BS unit.

1. On/off button

Press the button and the system will start. Press the button again and the system will stop.

2. Operation lamp (red)

The lamp lights up during operation.

3. Display “”

(changeover under control)

It is impossible to changeover heat/cool with the remote controller which display this icon.

4. Display “” (air flow flap)

Refer to the chapter “Operation procedure - Adjusting the air flow direction”.

5. Display “ OPTION” (ventilation/air cleaning)

This display shows that the total heat exchanger unit (Heat Reclaim Ventilation) are in operation. (these are optional accessories)

6. Display “” (set temperature)

This display shows the temperature you have set.

7. Display “” “” “” “” “” (operation mode)

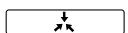
This display shows the current operation mode.

8. Display “” (programmed time)


This display shows the programmed time of the system start or stop.

9. Display “ TEST” (inspection/test operation)

When the inspection/test operation button is pressed, the display shows the mode in which the system actually is. (For servicing only)

10. Display “” (under centralized control)


When this display shows, the system is under centralized control. (This is not a standard specification.)

11. Display “” (fan speed)

This display shows the fan speed you have selected.

12. Display “” (time to clean air filter)

Refer to the operation manual of indoor unit.

13. Display “” (defrost/hot start)

Refer to the chapter “Operation procedure - Explanation of heating operation.”

14. Timer mode start/stop button

Refer to the chapter “Operation procedure - Programming start and stop of the system with timer.”

15. Timer on/off button

Refer to the chapter “Operation procedure - Programming start and stop of the system with timer.”

16. Inspection/test operation button

This button is only used by qualified service persons for maintenance purposes.

17. Programming time button

Use this button for setting the programming start and/or stop time.

18. Temperature setting button

Use this button for setting the desired temperature.

19. Filter sign reset button

Refer to the operation manual of indoor unit.

20. Fan speed control button

Press this button to select the fan speed of your preference.



21. Operation mode selector button

Press this button to select the operation mode of your preference.



22. Air flow direction adjust button

Refer to the chapter “Operation procedure - Adjusting the air flow direction”.

23. Fan only/air conditioning selector switch

Set the switch to “” for fan only operation or to “” for heating or cooling operation.

24. Cool/heat changeover switch

Set the switch to “” for cooling operation or to “” for heating operation.

25. Thermistor

It senses the room temperature around the remote controller.

26. These button are used when the total heat exchanger unit (Heat Reclaim Ventilation) are installed. (These are optional accessories.)

Refer to the operation manual of the total heat exchanger unit (Heat Reclaim Ventilation).

27. No function display

- If a function is not available in the indoor unit even if the button is pressed, “NOT AVAILABLE” is may be displayed for a few seconds.
- When using multiple units at the same time. “NOT AVAILABLE” is only displayed when none of the indoor units is equipped with that function.

If even one of the indoor units has the function, it will not be displayed.

NOTE

- In contradistinction to actual operating situations, the display on figure 2 shows all possible indications.
- Figure 2 shows the remote controller which is opened the cover.
- The remote controller BRC1A52 (for FXS, FXM, FXL, FXN) does not have the display air flow flap (4) nor the air flow direction adjust button (22).

5. OPERATION RANGE

	COOLING	HEATING
Ambient temperature around the outside unit	0°~40°C	
Ambient humidity around the outside unit	≤ 80%	
indoor temperature	21°~32°C	15°~27°C
Water temperature at the inlet of the outside unit	10°~45°C	
Water volume in the outside unit	50~150L/min*	

*This value shows a quantity of water per one outside unit.

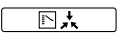

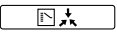
NOTE

To avoid condensation and water dripping out the unit. If the temperature or the humidity is beyond these conditions, safety devices may work and the air conditioner may not operate.





6. OPERATION PROCEDURE

- Operation procedure varies according to the combination of BS unit and remote controller. Read the chapter “What to do before operation”.
- To protect the unit, turn on the main power switch 6 hours before operation.
And do not turn off the power supply during the air conditioning season because of smoothly start up.
- If the main power supply is turned off during operation, operation will restart automatically after the power turns back on again.

6-1 COOLING, HEATING, AUTOMATIC AND FAN ONLY OPERATION

- Automatic operation can be selected only on the heat recovery system.
- The operation mode cannot be changed with the remote controller whose display shows “” (changeover under control).
Change the operation mode with the remote controller whose display does not show “”.
- When the display “” (changeover under control) flashes, refer to the chapter “Operation procedure - Setting the master remote controller”.
- The fan may keep on running for about 1 minute after the heating operation stops for removing the heat in the indoor unit.
- The air flow rate may be adjusted automatically depending on the room temperature or the fan may stop immediately. This is not a malfunction.
- For machine protection the system may control the air flow rate automatically.
- It may take sometime for finishing to change the air flow rate.
This is normal operation.






FOR SYSTEMS WITHOUT COOL/HEAT SELECTOR (Refer to figure 4)

- 1 Press the operation mode selector button several times and select the operation mode of your choice;
 - “” Cooling operation
 - “” Heating operation
 - “” Automatic operation
 - “” Fan only operation

NOTE

- Automatic operation (Heat recovery system only)
In this operation mode, cool/heat changeover is automatically performed.
- 2 Press the on/off button.
The operation lamp lights up and the system starts operation.

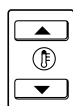
FOR SYSTEMS WITH COOL/HEAT SELECTOR (Refer to figure 4 and 7)

- 1 Select operation mode with the Cool/Heat selector as follows:
 - “” “” Cooling operation (Refer to figure 7.1)
 - “” “” Heating operation (Refer to figure 7.2)
 - “” Fan only operation (Refer to figure 7.3)
- 2 Press the on/off button. (Refer to figure 4)
The operation lamp lights up and the system starts operation.

ADJUSTMENT (Refer to figure 4)

For adjustment the desired temperature, fan speed and air flow direction (only for FXC, FXF, FXH, FXK, FXA), follow the procedure shown below.

- 3 Press the temperature setting button and set the desired temperature.



Each time this button is pressed, the temperature setting rises or lowers 1°C.

NOTE

- Set the temperature within the operation range.
 - The temperature setting is impossible for fan only operation.
- 4 Press the fan speed control button and select the fan speed of your preference.
 - 5 Press air flow direction adjust button.
Refer to the chapter “Adjusting the air flow direction” for details.


STOPPING THE SYSTEM (Refer to figure 4)

- 6 Press the on/off button once again.
The operation lamp goes off and the system stops operation.

NOTE

- Do not turn off the power immediately after the unit stops.
- The system needs at least 5 minutes for residual operation of drain pump device.
Turning off the power immediately will cause water leak or trouble.

EXPLANATION OF HEATING OPERATION

- In heating operation, it may generally take longer to reach the set temperature than in cooling operation.
We recommend starting the operation with timer.
- **Hot start operation**
In order to prevent cold air from blowing out of an indoor unit at the start of heating operation, the indoor fan is automatically stopped. The display of the remote controller shows “”.


NOTE 

- Do not place appliances which produce open fire in places exposed to the air flow from or under the indoor unit.
- It takes some time for the room to warm up from the time the unit is started since the unit uses a hot-air circulatory system to warm the entire room.
- If the hot air rises to the ceiling, leaving the area above the floor cold, we recommend using the circulator (the indoor fan for circulating air). Contact your dealer for details.

6-2 PROGRAM DRY OPERATION

- The function of this operation is to decrease the humidity in your room with a minimum temperature decrease.
- The microcomputer automatically determines temperature and fan speed.
- The system does not go into the operation if the room temperature is low.
- The microcomputer automatically controls the temperature and fan speed, so these cannot be set by using the remote controller.
- This function is not available if the room temperature is 20°C or lower.

FOR SYSTEMS WITHOUT COOL/HEAT SELECTOR (Refer to figure 5)


- 1 Press the operation mode selector button several times and select “  ” (program dry operation).
- 2 Press the on/off button.
The operation lamp lights up and the system starts operation.
- 3 Press the air flow direction adjust button (only for FXC, FXF, FXH, FXK, FXA). Refer to the chapter “Adjusting the air flow direction” for details.
- 4 Press the on/off button once again.
The operation lamp goes off and the system stops operation.

NOTE 

- Do not turn off the power immediately after the unit stops.
- The system need at least 5 minutes for residual operation of drain pump device. Turning off the power immediately will cause water leak or trouble.

FOR SYSTEMS WITH COOL/HEAT SELECTOR (Refer to figure 8)



- 1 Select cooling operation mode with the Cool/Heat selector.


- 2 Press the operation mode selector button several times and select program dry “  ”.
- 3 Press the on/off button.
The operation lamp lights up and the system starts operation.
- 4 Press the air flow direction adjust button (only for FXC, FXF, FXH, FXK, FXA). Refer to the chapter “Adjusting the air flow direction” for details.
- 5 Press the on/off button once again.
The operation lamp goes off and the system stops operation.

NOTE 

- Do not turn off the power immediately after the unit stops.
- The system need at least 5 minutes for residual operation of drain pump device. Turning off the power immediately will cause water leak or trouble.

6-3 ADJUSTING THE AIR FLOW DIRECTION (Refer to figure 6) (only for FXC, FXF, FXH, FXK, FXA)

- 1 Press the air flow direction button to select the air direction.
The air flow flap display swings as shown right and the air flow direction continuously varies. (Automatic swing setting) 
- 2 Press the air flow direction adjust button to select the air direction of your choice. 



The air flow flap display stops swinging and the air flow direction is fixed. (Fixed air flow direction setting) 

MOVEMENT OF THE AIR FLOW FLAP


For the following conditions, a microcomputer controls the air flow direction which may be different from the display.

COOLING	HEATING
<ul style="list-style-type: none"> • When continuous operation with downward air flow is performed at the time of cooling with FXH or FXA, the microcomputer may control the flow direction, and then the remote control indication also will change. 	<ul style="list-style-type: none"> • When starting operation. • When the room temperature is higher than the set temperature.
<ul style="list-style-type: none"> • When operating continuously at horizontal air flow direction. 	



The air flow direction can be adjusted in one of the following ways.



- The air flow flap itself adjusts its position.
- The air flow direction can be fixed by the user. Automatic “  ” or desired position “  ”. (Refer to figure 13)

NOTE 

- The movable limit of the flap is changeable. Contact your Daikin dealer for details. (Only for FXC, FXF, FXH, FXK, FXA.)
- Avoid operating in the horizontal direction “”. It may cause dew or dust to settle on the ceiling.





6-4 PROGRAMMING START AND STOP OF THE SYSTEM WITH TIMER (Refer to figure 9)

- The timer is operated in the following two ways.
Programming the stop time “ ▶ ”. The system stops operating after the set time has elapsed.


Programming the start time “ ▶  |”. The system starts operating after the set time has elapsed.





- The timer can be programmed for a maximum of 72 hours.
- The start and the stop time can be simultaneously programmed.

- 1 Press the timer mode start/stop button several times and select the mode on the display. The display flashes.



- For setting the timer stop “ ▶ ”
- For setting the timer start “ ▶  |”

- 2 Press the programming time button and set the time for stopping or starting the system.

 Each time this button is pressed, the time advances or goes backward by 1 hour.

- 3 Press the timer on/off button. The timer setting procedure ends. The display “ ▶ ” or “ ▶  |” changes from flashing light to constant light.


NOTE 

- When setting the timer off and on at the same time, repeat the above procedure (from “” to “”) once again.
- After the timer is programmed, the display shows the remaining time.
- Press the timer on/off button once again to cancel programming. The display vanishes.

For example: (Refer to figure 11)

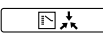
When the timer is programmed to stop the system after 3 hours and start the system after 4 hours, the system will stop after 3 hours and start 1 hour later.


6-5 SETTING THE MASTER REMOTE CONTROLLER (Refer to figure 10)


- When one outside unit or BS unit is connected with several indoor units as shown in figure 14, it is necessary to designate one of the remote controllers as the master remote controller.
- Only the master remote controller can select heating, automatic or cooling operation.
- The displays of slave remote controllers show “” (changeover under control) and they automatically follow the operation mode directed by the master remote controller. However, it is possible to changeover to program dry with slave remote controllers if the system is in cooling operation by setting on the master remote controller and to changeover to fan only operation.

How to designate the master remote controller

- 1 Press the operation mode selector button of the current master remote controller for 4 seconds.

The display showing “” (changeover under control) of all slave remote controllers connected to the same outside unit flashes.

- 2 Press the operation mode selector button of the controller that you wish to designate as the master remote controller. Then designation is completed. This remote controller is designated as the master remote controller and the display showing “” (changeover under control) vanishes.

The displays of other remote controllers show “” (changeover under control).

6-6 PRECAUTIONS FOR GROUP CONTROL SYSTEM OR TWO REMOTE CONTROLLER CONTROL SYSTEM

This system provides two other control systems beside individual control (one remote controller controls one indoor unit) system. Confirm about your system to Daikin dealer.


- **Group control system**
One remote controller controls up to 16 indoor units. All indoor units are equally set.
- **Two remote controllers control system**
Two remote controllers control one indoor unit (in case of group control system, one group of indoor units). The unit is individually operated.

NOTE 

- Contact your Daikin dealer in case of changing the combination or setting of group control and two remote controller control systems.

7. OPTIMUM OPERATION

Observe the following precautions to ensure the system operates properly.

- Adjust the room temperature properly for a comfortable environment. Avoid excessive heating or cooling.
- Prevent direct sunlight from entering a room during cooling operation by using curtains or blinds.
- Ventilate often.
Extended use requires special attention to ventilation.
- Do not keep doors and windows opened. If the doors and windows remain open, air will flow out of your room causing a decrease in the cooling or heating effect.
- Never place objects near the air inlet or the air outlet of the unit. It may cause deterioration in the effect or stop the operation.
- Turn off the main power supply switch to the unit when the unit is not used for longer periods of time. If the switch is on, it uses electricity. Before restarting the unit, turn on the main power supply switch 6 hours before operation to protect the unit. (Refer to the chapter “Maintenance” in the indoor unit manual.)
- When the display shows “” (time to clean the air filter), ask a qualified service person to clean the filters. (Refer to the chapter “Maintenance” in the indoor unit manual.)
- Keep the indoor unit and remote control at least 1 m away from televisions, radios, stereos, and other similar equipment.
Failing to do so may cause static or distorted pictures.
- Do not use other heating devices directly beneath the indoor unit.
If you do, they might get deformed by the heat.
- It takes time for the room temperature to reach the set temperature.
We recommend starting the operation in advance using timer operation.
- Fully use the function of air flow direction adjust. Cold air gathers on the floor, and warm air gathers in the ceiling.
Set the air flow direction parallel during cooling or dry operation, and set it downwards during heating operation. Do not let the air blow directly to a person.
- Make sure that the inlet and outlet of the indoor unit are not clogged.

8. MAINTENANCE

8-1 HANDLING OF HEAT SOURCE WATER

Requests from manufacturer;

- Do not fail to mount a strainer (sold separately as an accessory) in the inlet pipe for heat source water intake.
- Do not use any water contaminated by relatively high level of foreign materials for heat source.
- Carry out the control of water quality without fail. Otherwise, corrosion of condenser or piping occurs or germs may be generated.
- For the timing of cleaning and its method, consult with the dealer you purchased the unit.

Cleaning of the heat-exchanger on the water side

- Water scales, mosses, etc will accumulate on the heat-exchanger on the water side within an air-conditioner during use for a long period. Carry out cleaning at a regular interval. If water scales, mosses, etc. have accumulated, the cooling and heating capacity may decline. The safety device will be repeatedly actuated causing normal operation to become impossible.
- For use in an area where the water quality is poor, increase the frequency of cleaning.

Cleaning of strainer

- Clean the strainer in the inlet pipe of heat source water intake.

8-2 AT THE BEGINNING OF THE SEASON

Check

- Are the inlet and outlet of the indoor unit blocked? Remove anything blocking them.
- Run the pump and make sure that the water is circulating.
If you operate without water circulating, the unit may be damaged.

Clean the air filter and exterior.

- After cleaning the air filter, be sure to put it back in the same position.
See the operation manual included with the indoor unit for details on how to clean it.

Turn the power on.

- When the power comes on, the characters in the remote controller display appear.
(To protect the unit, turn the power on at least 6 hours before operating. This makes starting operation smooth.)

8-3 AT THE END OF THE SEASON

On a clear day, use fan operation for around half a day to thoroughly dry out the interior of the unit.

- Refer to page 6 for details on fan only operation.

Turn off the power.

- When the power is shut off, the characters in the remote controller display disappear.
- When the power is on, the unit consumes up to several dozen Watts of power.
Turn off the power to conserve energy.

Clean the air filter and exterior.

- After cleaning the air filter, be sure to put it back in the same position.
See the operation manual included with the indoor unit for details on how to clean it.
- If the water piping may freeze, keep operating the heat source water pump operating even during the unit stops.
- Remove all the water from the unit and the water piping if the pump is not used for a long time in winter.

9. FOLLOWING SYMPTOMS ARE NOT AIR CONDITIONER TROUBLES

9-1 THE SYSTEM DOES NOT OPERATE

- **The air conditioner does not start immediately when restarting the operation after stopping the operation or when putting the temperature back after changing the temperature setting with the temperature adjust button.**

If the operation lamp lights, the system is in normal condition.

To prevent overloading of the unit, the air conditioner starts 5 minutes after it is turned ON again in case it was turned OFF just before.

- **If “Centralized Control” is displayed on the remote controller and pressing the operation button causes the display to blink for a few seconds.**

This indicates that the central device is controlling the unit.

The blinking display indicates that the remote control cannot be used.

- **The system does not start immediately after the power supply is turned on.**

Wait one minute until the micro computer is prepared for operation.

9-2 IT STOPS SOMETIMES

- **The remote controller display reads “U4” or “U5” and stops but then restarts after a few minutes.**

This is because the remote control is intercepting noise from electrical appliances other than the air conditioner, and this prevents communication between the units, causing them to stop.

Operation automatically restarts when the noise goes away.

9-3 COOL/HEAT CANNOT BE CHANGED OVER

- **When the display shows “” (changeover under control).**

It shows that this is a slave remote controller. Refer to “Setting the master remote controller”.

- **When the cool/heat selector switch is installed and the display shows “” (changeover under control).**

This is because cool/heat changeover is controlled by the cool/heat selector. Ask your Daikin dealer where the remote control switch is installed.

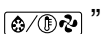

9-4 FAN OPERATION IS POSSIBLE, BUT COOLING AND HEATING DO NOT WORK

- **Immediately after the power is turned on.**
The micro computer is getting ready to operate. Wait 10 minutes.

- **Only fan operation is possible.**
This is because the interlock contact point is not turned on. (Check that the water pump is operating.)

This is because the inlet temperature (*1) of the heat source water is beyond the operating conditions (refer to page 5). (Check that it is in the range of the operating conditions.)

9-5 THE FAN SPEED DOES NOT CORRESPOND TO THE SETTING

- **The fan speed does no change even if the fan strength adjustment button is pressed.**
- When the room temperature reaches the set temperature during heating operation (extremely low fan speed operation).
- When operation is changed to fan operation while another indoor unit is in heating operation (extremely low fan speed operation).
- When the remote controller displays “” (stoppage).
- When the remote controller displays “” (automatic operation).

9-6 THE AIR FLOW DIRECTION DOES NOT CORRESPOND TO THE SETTING

- **The air flow direction does not correspond to the remote control display.**

The air flow direction does not swing.

This is because the unit is being controlled by the microcomputer. Refer to “Adjusting the air flow direction”.

9-7 WHITE MIST COMES OUT OF A UNIT

Indoor unit

- **When humidity is high during cooling operation.**

If the interior of an indoor unit is extremely contaminated, the temperature distribution inside a room becomes uneven. (*2) It is necessary to clean the interior of the indoor unit. Ask your Daikin dealer for details on cleaning the unit. This operation requires a qualified service person.

- **Immediately after the cooling operation stops and if the room temperature and humidity are low.**

This is because warm refrigerant gas flows back into the indoor unit and generates steam.

9-8 NOISE OF AIR CONDITIONERS

Indoor unit

- **A “zeen” sound is heard immediately after the power supply is turned on.**

The electronic expansion valve inside an indoor unit starts working and makes the noise. (*3) Its volume will reduce in about one minute.

- **A continuous low “shah” sound is heard when the system is in cooling operation or at a stop.** When the drain pump (optional accessories) is in operation, this noise is heard.

- **A “pishi-pishi” squeaking sound is heard when the system is in heating operation and at a stop.**

Expansion and contraction of plastic parts caused by temperature change make this noise.

- **A low “sah”, “choro-choro” sound is heard while the indoor unit is stopped.**

When the other indoor unit is in operation, this noise is heard. In order to prevent oil and refrigerant from remaining in the system, a small amount of refrigerant is kept flowing.

Outside unit

- **When the tone of operating noise changes.**

This noise is caused by the change of frequency.

Indoor unit, outside unit

- **A continuous low hissing sound is heard when the system is in cooling or heating operation.**

This is the sound of refrigerant gas flowing through both indoor unit and outside unit.

- **A hissing sound which is heard at the start or immediately after stopping operation.**

This is the noise of refrigerant gas caused by flow stop or flow change.

9-9 DUST COMES OUT OF THE UNIT

- **When the unit is used after stopping for a long time.**

This is because dust attached inside the indoor unit spouts out.

9-10 THE UNITS CAN GIVE OFF ODOURS

- **During operation.**

The unit can absorb the smell of rooms, furniture, cigarettes, etc., and then emit it again. (*2) It is necessary to clean the interior of the indoor unit. Ask your Daikin dealer for details on cleaning the unit. This operation requires a qualified service person.

9-11 THE DISPLAY SHOWS “88”

- **This is the case immediately after the main power supply switch is turned on.**

This means that the remote controller is in normal condition. This continues for one minute at maximum.

9-12 THE UNIT DOES NOT STOP

- **JUST AFTER THE OPERATION STOPS**

This is to prevent oil and refrigerant from remaining in the outside unit.

The unit will stop after 5 to 10 minutes.

9-13 THE COMPRESSOR IN THE OUTSIDE UNIT DOESN'T STOP

- **JUST AFTER THE OPERATION STOPS**

This is to prevent oil and refrigerant from remaining in the outside unit.

The unit will stop after 5 to 10 minutes.

9-14 THE UNIT IS WARM

- **WHEN THE UNIT STOPS**

This is because the crankcase heater is warming the compressor so that the compressor can start smoothly.

9-15 HOT AIR IS EMITTED EVEN THOUGH THE UNIT IS STOPPED

- **Hot air can be felt when the unit is stopped.**

Several different indoor units are being run on the same system, so if another unit is running, some refrigerant will still flow through the stopping unit.

9-16 DOES NOT COOL VERY WELL

- **Program dry operation.**

Program dry operation is designed to lower the room temperature as little as possible.

Refer to page 7.

*1 The VRV-WIII Series performs air conditioning by using a heat transfer with the cold water sent from the boiler or solar panel system. This is the cold water being spoken about.

- *2 The inside of the indoor unit needs to be washed. Specialized techniques are required for cleaning the unit, so contact your dealer.
- *3 This valve controls the amount of gas flow (refrigerant) through indoor unit.

10. TROUBLE SHOOTING


If one of the following malfunctions occur, take the measures shown below and contact your Daikin dealer.

WARNING

Stop operation and shut off the power if anything unusual occurs (burning smells, etc.)

Leaving the unit running under such circumstances may cause breakage, electrical shock, or fire.

Contact your dealer.

- If a safety device such as a fuse, a breaker or an earth leakage breaker frequently actuates;
Measure : Do not turn on the main power switch.
- If the ON/OFF switch does not properly work;
Measure: Turn off the main power switch.
- If water leaks from the unit;
Measure: Stop the operation.
- If the display “ TEST ”, the unit number and the operation lamp flash and the malfunction code appears; **(Refer to figure 12)**
 1. Inspection display
 2. Indoor unit number in which a malfunction occurs
 3. Operation lamp
 4. Malfunction code

Measure: Notify your Daikin dealer and report the malfunction code.

If the system shuts down due to an error, the backup operation function may allow the unit to continue running for several hours after it is started back up, but if this happens, be sure to contact your dealer.

If the system does not properly operate except for the above mentioned cases and none of the above mentioned malfunctions is evident, investigate the system according to the following procedures.

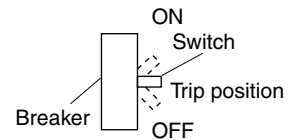
If it is impossible to fix the problem yourself after checking all the above items, contact your dealer. Let him know the symptoms, system name, and model name (listed on the warranty card).

1. If the system does not operate at all;
 - Check if there is no power failure.
Wait until power is restored. If power failure occurs during operation, the system automatically restarts immediately after the power supply is recovered.



- Check if no fuse has blown.
Turn off the power supply.

- Check if the breaker is down.

Turn the power on with the breaker switch in the off position.



Do not turn the power on with the breaker switch in the trip position. (Contact your dealer.)

2. If the system stops soon after starting the operation;
 - Check if air inlet or outlet of indoor unit is not blocked by obstacles.
Remove any obstacle and make it well-ventilated.
 - Check if the remote controller display shows “ ” (time to clean the air filter);
Refer to the operation manual of the indoor unit. And clean the air filter.
 - Check if all the valves in the water piping system.
Open all the valves in the water piping system.
 - Check if a strainer is choked.
Clean a strainer.
 - Check if a heat source water is circulating.
Inspect the water system.
 - Check if the inlet temperature of the heat source water is within its range.
Do not exceed its range.
 - Check if the water quantity of the heat source water is within its range.
Do not exceed its range.
3. The system operates but cooling or heating is insufficient;
 - Check if air inlet or outlet of indoor unit is not blocked by obstacles.
Remove any obstacle and make it well-ventilated.
 - Check if the remote controller display shows “ ” (time to clean the air filter);
Refer to the operation manual of the indoor unit. And clean the air filter.
 - Check the temperature setting.
Refer to “Operation procedure”.
 - Check the fan speed setting on your remote controller.
Refer to “Operation procedure”.
 - Check if the air flow angle is not proper.
Refer to “Operation procedure”.
 - Check for open doors or windows.
Shut doors and windows to prevent wind from coming in.
 - Check if direct sunlight enters the room during cooling operation.
Use curtains or blinds.
 - Check if there are too many occupants in the room during cooling operation.

- Check if the heat source of the room is excessive during cooling operation.
- Check if the inlet temperature of the heat source water is within its range.
Do not exceed its range.
- Check if the water quantity of the heat source water is within its range.
Do not exceed its range.

11. WATER QUALITY

In order to prevent water piping from corrosion and scale, use heat source water that meets the water quality standards below.

Water quality standards for chilled water, hot water and make-up water (4) (6)

Item (5)	Cooling water system (3)		Hot water system (2)		Tendency (1)	
	Circulation system		Circulation water (20°C ~ 60°C)	Make-up water	Corrosion	Scale
	Circulation water	Make-up water				
Standard items						
pH (25°C)	6.5 to 8.2	6.0 to 8.0	7.0 to 8.0	7.0 to 8.0	○	○
Electrical Conductivity (mS/m)(25°C)	Less than 80	Less than 30	Less than 30	Less than 30	○	○
Chloride ions (mgCl/L)	Less than 200	Less than 50	Less than 50	Less than 50	○	
Sulfate ions (mgSO ₄ ²⁻ /L)	Less than 200	Less than 50	Less than 50	Less than 50	○	
Acid consumption (pH4.8) (mgCaCO ₃ /L)	Less than 100	Less than 50	Less than 50	Less than 50		○
Total hardness (mgCaCO ₃ /L)	Less than 200	Less than 70	Less than 70	Less than 70		○
Calcium hardness (mgCaCO ₃ /L)	Less than 150	Less than 50	Less than 50	Less than 50		○
Ionic-state silica (mgSiO ₂ /L)	Less than 50	Less than 30	Less than 30	Less than 30		○
Reference items						
Iron (mgFe/L)	Less than 1.0	Less than 0.3	Less than 1.0	Less than 0.3	○	○
Copper (mgCu/L)	Less than 0.3	Less than 0.1	Less than 1.0	Less than 0.1	○	
Sulfate ion (mgS ²⁻ /L)	Shall not be detected	Shall not be detected	Shall not be detected	Shall not be detected	○	
Ammonium ion (mgNH ₄ ⁺ /L)	Less than 1.0	Less than 0.1	Less than 0.3	Less than 0.1	○	
Residual chlorine (mgCl/L)	Less than 0.3	Less than 0.3	Less than 0.25	Less than 0.3	○	
Free carbon dioxide (mgCO ₂ /L)	Less than 4.0	Less than 4.0	Less than 0.4	Less than 4.0	○	
Stability index	6.0 to 7.0	–	–	–	○	○

[NOTES]

- (1) The circle marks in the columns for corrosion or scale to develop.
- (2) Corrosion has a tendency to occur when water temperature is high (40°C or higher), and if metals with no protective coating whatever are directly exposed to water, it would be a good idea to take effective measures against corrosion such as adding a corrosion inhibitor or deaeration treatment.
- (3) In a condenser water circuit that uses a closed cooling tower, the closed circuit circulating water and make-up water must satisfy its water quality standards for the hot water system, and passing water and make-up water must satisfy those for the circulation type cooling water system.
- (4) Supply or make-up water should be tap water (clean water), industrial water and underground water except for purified water, neutral water and softened water or the like.
- (5) The fifteen items in the table above represent typical causes of corrosion and scale.
- (6) Passing water may cause corrosion.
Do not use passing water.

After-sales service and warranty

After-sales service:

WARNING

- **Do not disassemble, modify or repair the unit.**
This may cause water leakage, electric shock or fire.
Contact your dealer.
- **If the refrigerant leaks, keep out of fire.**
Although the refrigerant does not usually leak, if the refrigerant leaks out into a room and comes in contact with the combustible air in the equipment such as fan heater, stove, oil (gas) cooker, etc., it will cause toxic gas to be generated.
When a refrigerant leakage failure has been repaired, confirm a service person that the leakage point has been corrected surely before restarting operation.
- **Do not remove or reinstall the unit by yourself.**
Incorrect installation may cause water leakage, electrical shock or fire.
Contact your dealer.
- **When asking your dealer to repair, inform related staff of the details as follows:**
 - Model name and product No. of air conditioner:
Refer to the warranty card.
 - Shipping date and installation date:
Refer to the warranty card.

• **Malfunction:**

Inform the staff of the defective details.
(Malfunction code being displayed on the remote controller.)

• **Name, address, telephone number**

• **Repair after the warranty term is expired**

Contact your dealer. If necessary to repair, pay service is available.

• **Minimum storage period of important parts**

Even after a certain type of air conditioner is discontinued, we have the related important parts in stock for 9 years at least.

The important parts indicate parts essential to operate the air conditioner.

• **Recommendations for maintenance and inspection**

Since dust collects after using the unit for several years, the performance will be deteriorated to some extent.

Disassembling and cleaning inside require technical expertise, so we recommend entering a maintenance and inspection contract (at a cost) separate from normal maintenance.

• **Recommended inspection and maintenance cycles**

[Note: The maintenance cycle is not the same as the warranty period.]

Table 1 assumes the following usage conditions.

1. Normal use without frequent starting and stopping of the machine.
(Although it varies with the model, we recommend not starting and stopping the machine more than 6 times/hour for normal use.)
2. Operation of the product is assumed to be 10 hours/day, 2500 hours/year.

• **Table 1 “Inspection Cycle” and “Maintenance Cycle” Lists**

Name of Main Part	Inspection Cycle	Maintenance Cycle [replacements and/or repairs]
Electric motor (fan, damper, etc.)	1 year	20,000 hours
PC boards		25,000 hours
Heat exchanger		5 years
Sensor (thermistor, etc.)		5 years
Remote controller and switches		25,000 hours
Drain pan		8 years
Expansion valve		20,000 hours
Electromagnetic valve		20,000 hours

Note 1

This table indicates main parts. See the maintenance and inspection contract for details.

Note 2

This maintenance cycle indicates recommended lengths of time until the need arises for maintenance work, in order to ensure the product is operational as long as possible.

Use for appropriate maintenance design (budgeting maintenance and inspection fees, etc.).

Depending on the content of the maintenance and inspection contract, the inspection and maintenance cycles may in reality be shorter than those listed here.

Shortening of “maintenance cycle” and “replacement cycle” needs to be considered in the following cases.

1. When used in hot, humid locations or locations where temperature and humidity fluctuate greatly.
2. When used in locations where power fluctuation (voltage, frequency, wave distortion, etc.) is high. (Cannot be used if it is outside the allowable range.)
3. When installed and used in locations where bumps and vibrations are frequent.
4. When used in bad locations where dust, salt, harmful gas or oil mist such as sulfurous acid and hydrogen sulfide may be present in the air.
5. When used in locations where the machine is started and stopped frequently or operation time is long. (Example: 24 hour air-conditioning)

■ **Recommended replacement cycle of wear-out parts**

[The cycle is not the same as the warranty period.]

- Table 2 “Replacement Cycle” Lists

Name of Main Part	Inspection Cycle	Replacement Cycle
Air filter	1 year	5 years
High efficiency filter (Optional accessory)		1 year
Fuse		10 years
Crankcase heater		8 years

Note 1

This table indicates main parts. See the maintenance and inspection contract for details.

Note 2

This maintenance cycle indicates recommended lengths of time until the need arises for maintenance work, in order to ensure the product is operational as long as possible.

Use for appropriate maintenance design (budgeting maintenance and inspection fees, etc.).

Contact your dealer for details.

Note: Breakage due to taking apart or cleaning inside by anyone other than our authorized dealers may not be included in the warranty.

■ **Moving and discarding the unit**

- Contact your dealer for removing and reinstalling the total enthalpy heat exchanger when moving house since they require technical expertise.
- This total enthalpy heat exchanger uses chlorofluorocarbon.

Contact your dealer for discarding this unit since it is required by law to collect, transport and discard the refrigerant in accordance with “chlorofluorocarbon collection and destruction” law.

■ **Where to call**

For after-sales service, etc., consult with your dealer.

■ **Warranty period:**

- This product includes a warranty card.
The warranty card is given to a customer after dealer staff fills out necessary items in the card. The customer should check the entered items and store it carefully.
Warranty period: Within one year after installation.
 For further details, refer to the warranty card.
- If it is necessary to repair the air conditioner within the warranty period, contact your dealer and show your warranty card. If the warranty card is not shown, pay-service repair may be performed even though the warranty period is not expired.

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